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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,073

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EXAMINER

SOROUGH, ALI

ART UNIT

PAPER NUMBER

1616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,073	Applicant(s) ASAKURA, TAKASHI	
	Examiner ALI SOROUGH	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) 20 and 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-19 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement of Receipt

Applicant's response filed on 02/01/2008 to the Office Action mailed 10/01/2007 is acknowledged.

Status of the Claims

Claims 21 and 22 are cancelled, claims 20 and 23-28 are withdrawn, and claim 15 is currently amended. Therefore, claims 15-19 and 29 are currently pending examination for patentability.

Rejections and/or objections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deissmann et al. (US Patent 3330798, Published 07/11/1967) in view of Wang et al. (US Patent 6197319 B1, Published 03/06/2001) and Chevalier et al. (US Patent 09/04/2001).

Applicant Claims

Applicant claims a particulate titanium dioxide of rutile crystalline form comprising in the crystalline lattice 0.05 to 0.5% by weight of aluminium oxide and 0.1 to 1% by weight of zinc oxide, the balance being titanium and having a primary particle size between 0.5 to 2.0 μm and a reflectivity to visible light less than 95%.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Deissmann et al. teach, "The present invention is concerned with a process for increasing the light stability of rutile pigments in melamine or/and urea-formaldehyde resins." (See column 1, Lines 13-15). "It is also known to add to titanium dioxide pigments before calcination, oxide of various other metals or compounds yielding, during calcination, such oxides, for example, of zinc, magnesium or aluminum, in order,

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for example, to improve the conversion of anatase into rutile during calcination or in order to increase the brightening property or stability of the pigments." (See column 1, Lines 25-31). Deissmann et al. further exemplifies the production of a rutile pigment with 0.3% aluminum oxide, referred to the titanium oxide (See column 2, Lines 71-72) and a rutile pigment with 1.0% zinc oxide, referred to the titanium oxide (See column 3, Lines 41-42).

Ascertainment of the Difference Between Scope the Prior Art and the Claims

(MPEP §2141.012)

Deissmann et al. does not anticipate a titanium dioxide particulate having both an aluminum oxide and zinc oxide incorporated into its lattice. However, such a particulate would be obvious in light of the teachings of Deissmann et al.

Deissmann et al. is silent as to the primary particle size of the titanium dioxide particulate. This deficiency is cured by the teachings of Wang et al. and Chevalier et al.

Wang et al. teach a cosmetic composition comprising particles of melamine-formaldehyde or urea formaldehyde resin. (See title). "The use of said composition, especially cosmetic composition for caring for and/or making up skin, such as microrelief features, wrinkles or pores, while conferring a natural appearance on the skin, and to its use in treating greasy skin." (See abstract). The composition "further comprising one or more adjuvants selected from the group consisting of dyes, pigments, fragrances, preservatives, sunscreens, fat-soluble or water-soluble active agents, sequestering agents, moisturizers, gelling agents and fillers." (See column 8, claim 10).

Chevalier et al. teach cosmetic compositions comprising: polysaccharide /protein complexes, water, particulate matter, surfactant, and oil. (See title and column 6, Lines 51-56). "The makeup or color cosmetic composition preferably comprises 1-20%, more preferably 1.5%-18% of particulate matter having a particle size of 0.01 to 200, preferably 0.25 to 100 microns." (See column 63-66). One example of particulate matter that may be used includes titanium dioxide. (See column 7, Lines 2-24). "The invention is in the field of cosmetic composition for application to the skin." (See column 1, Lines 8-9).

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art to add both aluminum oxide and zinc oxide to the titanium dioxide particulate taught by Deissmann et al. One would have been motivated to do so since Deissmann et al. teaches that addition of such oxides provides an advantage to the formation of the rutile and also the properties of the titanium dioxide, therefore, if one wanted to enhance such advantages one would be motivated to add both oxides to the titanium dioxide particulate.

With regard to the primary particle size instantly claimed the teachings of Wang et al. and Chevalier et al. make such a particle size obvious. One would have been motivated to form the titanium dioxide in particles sizes of 0.25 to 100 microns because such particles sizes are taught by Chevalier et al. to be commonly used in cosmetics utilizing titanium dioxide particles. Since the Wang et al. teach that the combined titanium dioxide and melamine or/and urea-formaldehyde resins taught by Deissmann

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et al. have utility in cosmetics it would be expected that the titanium dioxides taught by Deissmann et al. should be of the particles sizes commonly used in cosmetics.

The instant claims are not structurally distinguishable from the prior art and therefore it is the examiners position that the titanium dioxide particle of Deissmann et al. would necessarily possess the characteristics of having a reflectivity to visible light less than 95% and exhibit a transmittance to infrared radiation which is not 0.2 more than that of rutile dioxide pigment of 0.2 to 0.4 particle size. For the foregoing reasons the instant titanium dioxide particles would have been obvious to one of ordinary skill in the art at the time of the instant invention.

2. Claims 16, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deissmann et al. (US Patent 3330798, Published 07/11/1967) in view of Wang et al. (US Patent 6197319 B1, Published 03/06/2001) and Chevalier et al. (US Patent 09/04/2001) further in view of Holbein (US Patent 3560234, Published 02/02/1972).

Applicant Claims

Applicant claims a particulate titanium dioxide of rutile crystalline form comprising in the crystalline lattice 0.05 to 0.5% by weight of aluminium oxide and 0.05 to 5% by weight of zinc oxide, the balance being titanium and having a primary particle size between 0.5 to 2.0 μm and a reflectivity to visible light less than 95%.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The combined teachings of Deissmann et al. with Wang et al. and Chevalier et al. are disclosed above.

Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)

The combined teachings of Deissmann et al. with Wang et al. and Chevalier et al. lack a teaching wherein the zinc oxide concentration is 0.05 to 0.5%. This deficiency is cured by the teachings of Holbein.

Holbein teaches a process for the manufacture of pigments of titanium dioxide in the rutile form. (See title). The resulting pigment is 100% rutile and has a zinc oxide content of 0.5%. (See column 4, Lines 19-21). The use of such product has the advantage that it provides a pure undertone. (See column 2, Lines 46-55).

Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)

It would have been obvious to combine the teachings of Deissmann et al., Wang et al. and Chevalier et al. with Holbein. One would have been motivated to do so because by adjusting the zinc oxide concentration to 0.5% in the titanium dioxide taught by Deissmann et al. one would arrive at a pigment that has a pure undertone. For the foregoing reasons the instant titanium dioxide particles would have been obvious to one of ordinary skill in the art at the time of the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925.

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The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number For the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Soroush
Patent Examiner
Art Unit: 1616

/Mina Haghighatian/
Primary Examiner, Art Unit 1616